Lake Carr Lake Vegetation Index Results (9-30-2014)

The Lake Vegetation Index (LVI) is a multimetric index that evaluates how closely a lake's plant community resembles one that would be expected in a condition of minimal human disturbance. It is based on a rapid field assessment of aquatic and wetland plants as indicators of various effects of human disturbance over time. Plants respond to physical disturbances such as introduction of exotic species or lakeshore alterations, and chemical disturbance such as introduction of excess nutrients, particulates, or herbicides from the surrounding land uses.

The LVI method is performed from a boat, and involves dividing a lake into 12 units and identifying plants in 4 of the 12 units. Plants are identified in the selected unit by a visual boat "drive by" and also via a transect approach. The resulting data is used to calculate the LVI and is evaluated according to the scoring system in Table 1.

TABLE 1. Category names, ranges of values for LVI, and example descriptions of biological conditions typically found for that category.

Aquatic life use category	***LVI Range***	***Description***
Exceptional	78–100	Nearly every plant present is a species native to Florida, invasive taxa typically not found. About 30% of taxa present are identified as sensitive to disturbance.
Healthy	43–77	About 85% of plant taxa are native to Florida; invasive taxa present. Sensitive taxa have declined to about 15%.
Impaired	0–42	About 70% of plant taxa are native to Florida. Invasive taxa may represent up to 1/3 of total taxa. Less that 10% of the taxa are sensitive.

The Lake Vegetation Index score for Lake Carr was 70, placing the lake's vegetative community in the healthy category.

Fifty nine plant species were found during the survey. The native species, fanwort (*Cabomba caroliniana*), coontail (*Ceratophyllum demersum*) and fragrant waterlily (*Nymphaea odorata),* were the most dominant plants in the lake. Other native shoreline vegetation included; red maple (*Acer rubrum*), buttonbush (*Cephalanthus occidentalis*) and dotted smartweed (*Polygonum punctatum*).

Unfortunately, Chinese tallow tree (*Sapium sebiferum*) and water hyacinth (*Eichhornia crassipes*), both listed as Category I Invasive Exotics by the Florida Exotic Pest Plant Council, are invasive exotics that are a concern in Lake Carr. Alligator weed (*Alternanthera philoxeroides*) was the only Category II Invasive Exotic found in the lake.

For a complete list of plants found during the LVI survey, please see Table 2.

TABLE 2. Scientific and common names of the plants identified during the Lake Carr LVI survey (9-30-14).

Species	Common Name
Agalinis sp.	false fox glove
Alternanthera philoxeroides (II)	alligator weed
Bacopa caroliniana	lemon Bacopa
Bidens laevis	smooth beggartick
Bidens mitis	smallfruit beggartick
Boehmeria cylindrica	false nettle
Brasenia schreberi	watershield
Cabomba caroliniana	Fanwort
Cephalanthus occidentalis	buttonbush
Ceratophyllum demersum	coontail
Cyperus odoratus	fragrant flatsedge
Decodon verticillatus	swamp loosestrife
Diospyros virginiana	common persimmon
Dulichium arundinaceum	three-way sedge
Eichhornia crassipes (I)	water hyacinth
Eleocharis baldwinii	road-grass
Eleocharis cellulosa	gulf coast spikerush
Eupatorium capillifolium	dogfennel
Fuirena breviseta	saltmarsh umbrella sedge
Habenaria repens	water spider orchid
Hydrocotyle sp.	water pennywort
Juncus effusus	common rush
Leersia hexandra	southern cutgrass
Limnobium spongia	frog's bit
Liquidamber styraciflua	American sweetgum
Ludwigia arcuata	needleleaf Ludwigia
Ludwigia leptocarpa	anglestem primrose willow
Ludwigia sphaerocarpa	globe-fruited primrose willow
Luziola fluitans	southern watergrass
Myrica cerifera	wax myrtle
Myriophyllum heterophyllum	twoleaf watermilfoil
Nelumbo lutea	American lotus
Nuphar sp.	spatterdock
Nymphaea odorata	fragrant waterlily
Nymphoides aquatica	banana lilly
Panicum hemitomon	maidencane
Pinus taeda	loblolly pine
Polygonum densiflorum	denseflower knotweed
Polygonum punctatum	dotted smartweed

Pontederia cordata	pickerelweed
Rhynchospora inundata	narrowfruit horned beaksedge
Rhynchospora scirpoides	bald rush
Ricciocarpus natans	purple-fringed Riccia
Saccharum giganteum	sugarcane plumegrass
Sacciolepis striata	American cupscale-grass
Sagittaria lancifolia	duck potato
Sagittaria latifolia	broadleaf arrowhead
Salix carolina	coastal plain willow
Sapium sebiferum (I)	Chinese tallow tree
Scirpus cubensis	burhead sedge
Scirpus cyperinus	woolgrass
Solidago fistulosa	pine barren goldenrod
Sphagnum sp.	sphagnum moss
Taxodium ascendens	pond cypress
Triadenum virginicum	marsh St. John's wort
Typha sp.	cattail
Utricularia biflora (U. gibba)	humped bladderwort
Utricularia foliosa	leafy bladderwort
Xyris jupicai	Richard's yellow-eyed grass

I - Category I Invasive Exotics
II - Category II Invasive Exotics

For additional information about the LVI please review the Florida Department of Environmental Protection's LVI Primer document.

For more detailed information about the above species, please visit the Atlas of Florida Vascular Plants website.

For additional information about Category I and II invasive exotic plants, please visit the Florida Exotic Pest Plant Council webpage.